



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/850,349	05/07/2001	Ralph Antonius Cornelius Braspenning	PHNL 000276	2295
24737	7590	01/27/2005	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS			PATEL, SHEFALI D	
P.O. BOX 3001			ART UNIT	
BRIARCLIFF MANOR, NY 10510			PAPER NUMBER	
			2621	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/850,349

Applicant(s)

BRASPENNING ET AL.

Examiner

Shefali D Patel

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/23/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment was filed on July 23, 2004.
2. Amendment made to the title of the invention has been accepted.
3. Amendment to the drawings, Figures 1-2, has been accepted.
4. Claim objection made to claims 1, 4, and 7 has been withdrawn.
5. 35 U.S.C. 112 2nd paragraph rejection made to claims 3 and 6 has been withdrawn.

Information Disclosure Statement

6. The information disclosure statement (IDS) submitted on August 2, 2001 has been considered by the examiner upon receiving the copies of the references, GB 2279531, WO 9922520, and WO 9120155 along with the amendment filed on July 23, 2004. The submission is in compliance with the provisions of 37 CFR 1.97.

Response to Arguments

7. Applicants' arguments, see pages 8-9 of remarks, filed on July 23, 2004, with respect to claims 7 and 8 have been fully considered and are persuasive. The rejection of claims 7 and 8 with regards to a statutory type provisional double patenting has been withdrawn.
8. Applicants' arguments, see pages 9-10 of remarks, filed July 23, 2004, with respect to claims 1 and 4 have been fully considered but they are not persuasive. However, the arguments are moot because the co-pending application 09/850,347 have been patented (USPN 6,810,134) and the nonstatutory double patenting is not valid in result of the issue of US 6,810,134. The rejection of claims 1 and 4 with regards to a nonstatutory provisional double patenting has been withdrawn.
9. Applicants' arguments filed on July 23, 2004 (pages 12-14) with regard to claims 1-6 rejected under 35 U.S.C. 102(e) anticipated by Gu have been fully considered but they are not persuasive.

Art Unit: 2621

Applicants' argue on pages 12 and 13 stating that "Although pixel selection in building the block in frame N is limited to whose pixels within an object, pixel selection selects pixels regardless of whether the pixel is visible or invisible," (page 12) and "In any event, the selection of pixels is made based on whether the pixel is within the object...regardless of whether the pixel is visible or invisible," (page 13). The examiner disagrees. Note that Gu does not select the values that fall outside of the selected area (represented by cross-hatched area 168 in Figure 5B) of pixel 166 at col. 14 lines 22-25. The pixels that fall outside of the selected area are omitted when matching the corresponding pixel blocks according to a minimum error as disclosed by Gu at col. 14 lines 16-29. Note, the pixels that are being omitted (i.e., occluded) by Gu are invisible and the pixels that are kept in for further processing of correlation according to the candidate values of the image are considered visible.

Applicants' argue on page 14 of the remarks stating that "the second full paragraph of page 8 of item 13 of the Office Action tacitly acknowledges, e.g., by not mentioning the word "same (specification, page 8, line 6: "same," that Gu fails to disclose or suggest the above-quoted limitation of claim 9. Accordingly, claim 9 is not anticipated by Gu." The examiner disagrees. Please note that Gu discloses the pixels of the first image being matched (i.e., correlated) with the pixels from the second image that are at the same position (pixel is position x, y in the first image is matched with pixels at position x', y' in the second image) as disclosed at col. 16 lines 1-11, 19-27, and 47-56.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2621

11. Claims 1-2, 4-5, and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Gu (US 6,075,875).

With regard to **claim 1** Gu discloses a method of choosing an optimal candidate value to be used for matching a block from a first image (54a, Fig. 2A) with an area from a second image (54b, Fig. 2b), the method comprising:

- (a) making a set of candidate values for determining an area to be matched from the second image (the first image is segmented and represented by binary or multi-bit of the objects, col. 9 lines 17-37 and further the interior and exterior outlines defines a cluster representation of five-dimensional vector in the form of (r, g, b, x, y) at col. 13 lines 49-60. These are the set of values (pixel values and location) from which a user defines feature points of the object in the image frame at col. 9 lines 37-56 and col. 14 lines 10-12),
- (b) for each candidate value from the set, determining an area to be matched from the second image, based on said candidate value, matching the block from the first image with this area and calculating a matching error (matching images: See, col. 14 lines 25-29; col. 15 lines 4-8; calculating error E at col. 15 line 50), and
- (c) choosing the optimal candidate value from the set based on the calculated matching errors (determining motion vector and using that to determined the matching feature point in a successive image frame. Col. 14 lines 30-44), characterized in that the block is formed by pixels (See, col. 14 lines 16-17, 20-22), a selection is made of pixels of the block from the first image (function block 214 selects an initial pixel at col. 15 lines 10-14, See also col. 16 lines 19-25) which are visible in the area (See Figures 7A and 7B where two image frames 202a and 202b are shown where pixel 226 is shown by cross-hatching in Fig. 7B. Note that the non-cross-hatched area that is included within the image is considered visible and the cross-hatched area 168 as clearly seen in Fig. 5B is being omitted (considered non-visible) by Gu) to be matched from the second image (See, col. 14 lines 25-29; col. 15 lines 4-8), and the calculation of a

Art Unit: 2621

matching error (See the error E being calculated by the summation equation, col. 15 lines 40-56) excludes from the calculation said pixels of the block that are not selected in said selection (when selection is made the cross-hatch are 168 is omitted (i.e., not selected) from calculation because it falls out of the object area 68 seen in Fig. 5B. Further when determining motion video (video imaging), Gu discloses determining visible and invisible pixels in the current and future/previous frame at col. 32 line 65 to col. 33 lines 1-16).

With regard to **claim 2** Gu discloses a method as claimed in claim 1, characterized in that the selection is made by determining for the pixels of the block from the first image what their location is in the area to be matched from the second image, and selecting a pixel based on a comparison with other pixels of the block from the first image which are found at the same position (see arguments above in paragraph 9) in the area to be matched from the second image (the location is known by the x and y coordinate of the block in the image frame and the selection is based on that. Also, selecting based on a comparison with other pixels of the block as seen at col. 15 line 66 to col. 16 lines 1-56).

Claim 4 recites identical features as claim 1 except claim 4 is a system claim. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 4. Note Gu discloses a system in Figure 1.

Claim 5 recites identical features as claim 2 except claim 5 is a system claim. Thus, arguments similar to that presented above for claim 2 is equally applicable to claim 5.

Claim 7 recites identical features as claim 1 except claim 7 is an apparatus claim. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 7. Note Gu discloses an apparatus in Figure 1.

With regard to **claim 8** Gu discloses a display system 28 as seen in Figure 1.

With regard to **claim 9**, applicants admit on page 14 of the remarks filed on July 23, 2004 that "original claim 2 has now been redrafted into independent form as new claim 9 with the addition of the

Art Unit: 2621

comma for consistency with claim 4.” Therefore, with regard to **claim 9** Gu discloses the method as disclosed above in claims 1-2 and the arguments are not repeated herein, but are incorporated by reference.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 3 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gu (US 6,075,875).

With regard to **claim 3** Gu discloses method of 1 as disclosed above in claim 1 and the arguments are not repeated herein, but are incorporated by reference. Gu does not expressly disclose comparing based on depth of the pixels to be compared in their respective images. However, Gu discloses processing multi-dimensional transformation. Therefore, it would have been obvious matter of design choice to modify Gu’s reference by having the comparison being done based on the depth of the pixel to be compared in their respective images since applicant has not discloses that having comparison being done based on the depth solves any stated problem (specification, page 2 lines 19-25) or is for any particular purpose and it appears that the comparing by way of Gu’s invention would perform equally well.

Claim 6 recites identical features as claim 3 except claim 6 is a system claim. Thus, arguments similar to that presented above for claim 3 is equally applicable to claim 6.

Claim 7 recites identical features as claim 1 except claim 7 is an apparatus claim. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 7. Note Gu discloses an apparatus in Figure 1.

Art Unit: 2621

With regard to **claim 8** Gu discloses a display system 28 as seen in Figure 1.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,909,251 – Image frame fusion by velocity estimation using region merging

US 4,828,393 – Position measuring method.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D Patel whose telephone number is 703-306-4182. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

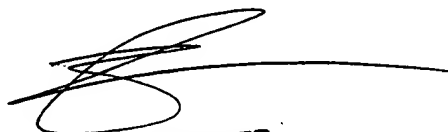
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shefali D Patel
Examiner
Art Unit 2621

January 19, 2005



BRIAN WERNER
PRIMARY EXAMINER